Growing Sy“STEM”ically
In Spotsylvania

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SCPS Mission Statement

Together... we prepare our students for their future.
SCPS Vision Statement

Spotsylvania County Schools is a leading school division that inspires and empowers all students to become creative thinkers, problem solvers and effective communicators by:

• Ensuring an engaging and supportive learning environment
• Providing a broad spectrum of innovative opportunities
• Building lasting partnerships with the community to educate our students
S = SCIENCE
T = TECHNOLOGY
E = ENGINEERING
M = MATHEMATICS
RISING ABOVE THE GATHERING STORM

Energizing and Employing America for a Brighter Economic Future

2005

RISING ABOVE THE GATHERING STORM, REVISITED

Rapidly Approaching Category 5

2010
All Scientific Publications Published, 2001
All Scientific Publications Published, 2001
Earnings Comparison
... the world’s poorest countries are still waiting for the promised benefits of stronger patent protection at home." The Economist, 2001
Chart 3. Who is Responsible for Workplace Readiness

- K-12 schools
- 4-year colleges
- Recent entrants
- 2-year college
- Government
- Other
- State govs
- Local govt
- Federal govt
- Community agencies
- Labor unions

STEM Interviews
The Journey of a Developing STEM Teacher
The Journey of a Developing STEM Teacher
The Journey of a Developing STEM Teacher
The Journey of a Developing STEM Teacher
The Journey of a Developing STEM Teacher

Call to Adventure

Exit Comfort Zone

KNOWN

UNKNOWN
The Journey of a Developing STEM Teacher

Call to Adventure

Exit Comfort Zone

Professional Development

Known

Unknown
The Journey of a Developing STEM Teacher

KNOWN

UNKNOWN

Call to Adventure

Exit Comfort Zone

Professional Development

Coaches

Mentors
The Journey of a Developing STEM Teacher

- Call to Adventure
- Exit Comfort Zone
- Professional Development
- Coaches
- Mentors
- Trials and Tribulations

Known

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Trials and Tribulations

Abyss - Rebirth
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Mentors

Trials and Tribulations

Revelation

Abyss - Rebirth

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Professional Development

Coaches

Mentors

Transformation

Revelation

Trials and Tribulations

Abyss - Rebirth

KNOWN

UNKNOWN
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Call to Adventure

Return to Comfort Zone

known

UNKNOWN

Exit Comfort Zone

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Abyss - Rebirth

Trials and Tribulations

Reflection

KNOWN

UNKNOWN
Mad About STEM
I DO......

...professional learning
WE DO......

...teach together in an after-school club with coaching.
YOU DO....

“STEMming up” lessons!

...... teaching on your own in the classroom.
YOU DO....

“STEMming up” lessons!

..... teaching on your own in the classroom.
Strategies vs. Activities

• Develop Lessons Thoughtfully

• Real-World Problems

• Questioning Strategies/Walking Away

• Teach Thematically
Strategies vs. Activities

• Less is More!

• Encourage Creativity

• Failure IS an option

• Classroom Management
Educators from:
Spotsylvania
Stafford
Fredericksburg Academy
Fredericksburg City
UMW
College of William and Mary
Germanna
STEM Summit

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Spotsylvania
Stafford
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College of William and Mary
Germanna
Pilot Year: 2013

1 Middle School

3 Elementary Schools
Virginia Demonstration Project

Robotics Program- 2005

• ALL 7 middle schools participate during the school day.

• Individualized at each school
Partnership with Dahlgren

1 Elementary School

1 Middle School
Sharing and Learning

Teachers Working Collaboratively To Promote STEM Teaching and Learning
Collaboration
Critical thinking
Problem-solving
Independence
Interdependence
Life-long Learning
Collaboration

Critical thinking

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